

Patent Abstracts of Japan

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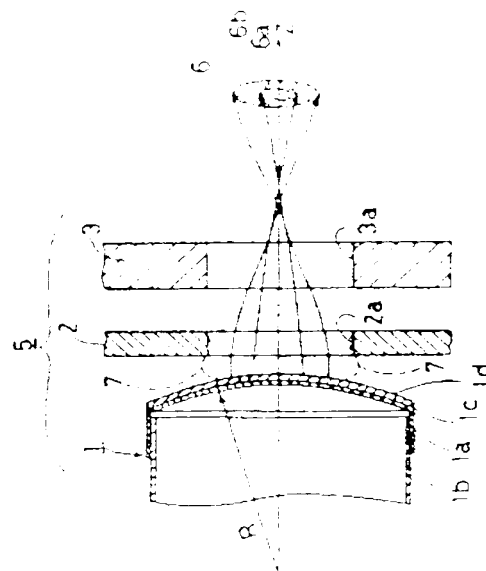
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APPLICANT : MITSUBISHI ELECTRIC CORP.

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TITLE : ELECTRON GUN



ABSTRACT : PURPOSE: To improve the focus performance of a cathode-ray tube by forming a cathode face formed with an electron emitting material layer into a convex face expanded toward the first grid.

CONSTITUTION: An electron emitting material layer 1c is formed in front of a cap-shaped body 1a having the center point on the center axis Z and formed into a spherical shape expanded toward the first grid 2. The size of its radius R is determined in response to the size of the electron beam passing hole 2a of the first grid 2 and set so that the position of an equipotential line 6 on a cathode face 1d is within the projection plane of the electron beam passing hole 2a even if the bias is zero. Accordingly, the expansion of the electron emission area forming an electron beam can be prevented even if the bias is zero, the circular electron beam flux forming the outermost periphery in a conventional device is not formed, the diameter of the electron beam flux  $\theta$  is decreased as much, and a spot on a fluorescent screen is made small.

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